



Author index

- Bartsch, H. 41
 Caldeira, M.M.M. 1
 Chapelle, S. 67
 Csizmadia, I.G. 17
 De Nino, A. 77
 Ding, X. 161
 Du, M. 87
 Ebrahim, H. 189
 Estrada, M.D. 55
 Evans, D.J. 189
 Fuentes, J. 55
 García Fernández, J.M. 55
 Gil, V.M.S. 1
 Hindsgaul, O. 87
 Hintze, U. 41
 Huyghues-Despointes, A. 179
 Jesús Diánez, M. 55
 Jiménez Blanco, J.L. 55
 Kondo, S. 173
 Kong, F. 161
 König, W.A. 41
 Kawahara, R. 107
 Lamba, D. 17
 Lehmann, J. 189
 Lerner, L.E. 151
 Liguori, A. 77
 López-Castro, A. 55
 Morisaki, K. 123
 Nishimura, Y. 173
 Ortiz Mellet, C. 55
 Ozaki, S. 123
 Pérez-Garrido, S. 55
 Procopio, A. 77
 Ramos, M.L.D. 1
 Renard, C.M.G.C. 139
 Roberti, E. 77
 Satoh, T. 173
 Sauvage, J.-P. 67
 Sicifksa, W. 151
 Sindona, G. 77
 Somsák, L. 167
 Straßner, M. 41
 Takeuchi, T. 173
 Tang, T.-H. 17
 Thibault, J.-F. 139
 Tsuchiya, T. 107
 Verchère, J.-F. 67
 Whitfield, D.M. 17
 Yaylayan, V.A. 179
 Ziser, L. 189



Author index

- Bartsch, H. 41
 Caldeira, M.M.M. 1
 Chapelle, S. 67
 Csizmadia, I.G. 17
 De Nino, A. 77
 Ding, X. 161
 Du, M. 87
 Ebrahim, H. 189
 Estrada, M.D. 55
 Evans, D.J. 189
 Fuentes, J. 55
 García Fernández, J.M. 55
 Gil, V.M.S. 1
 Hindsgaul, O. 87
 Hintze, U. 41
 Huyghues-Despointes, A. 179
 Jesús Diánez, M. 55
 Jiménez Blanco, J.L. 55
 Kondo, S. 173
 Kong, F. 161
 König, W.A. 41
 Kawahara, R. 107
 Lamba, D. 17
 Lehmann, J. 189
 Lerner, L.E. 151
 Liguori, A. 77
 López-Castro, A. 55
 Morisaki, K. 123
 Nishimura, Y. 173
 Ortiz Mellet, C. 55
 Ozaki, S. 123
 Pérez-Garrido, S. 55
 Procopio, A. 77
 Ramos, M.L.D. 1
 Renard, C.M.G.C. 139
 Roberti, E. 77
 Satoh, T. 173
 Sauvage, J.-P. 67
 Sicifksa, W. 151
 Sindona, G. 77
 Somsák, L. 167
 Straßner, M. 41
 Takeuchi, T. 173
 Tang, T.-H. 17
 Thibault, J.-F. 139
 Tsuchiya, T. 107
 Verchère, J.-F. 67
 Whitfield, D.M. 17
 Yaylayan, V.A. 179
 Ziser, L. 189



Subject index

Ab initio calculations

Binding properties of carbohydrate sulfonates based on ab initio 6-31 + G^{**} calculations on *N*-methyl and *N*-ethyl sulfonate anions 17

1-Alkoxy-2-haloethyl glucopyranosides

Mixed-acetal glucopyranosides of 2-bromo- and 2-iodo-acetaldehyde by mild alkylation of lactol groups. Irreversible cross inhibition using a pair of glycosidases 189

Amadori compound

Identification of per-*O*-(trimethylsilyl) derivatives of aldoses generated from thermal decomposition of *N*-(1-deoxy-D-fructopyranos-1-yl)proline: reversibility of the Amadori rearrangement 179

Amidines

Preparation of amidine derivatives from 1-cyano-D-galactal 167

1,2-Anhydro-3,5-di-*O*-benzyl- β -D-arabinofuranose

Synthesis of 1,2-anhydro-3,5,6-tri-*O*-benzyl- α -L-gulofuranose and 1,2-anhydro-3,5-di-*O*-benzyl- β -D-arabinofuranose 161

1,2-Anhydro-3,5,6-tri-*O*-benzyl- α -L-gulofuranose

Synthesis of 1,2-anhydro-3,5,6-tri-*O*-benzyl- α -L-gulofuranose and 1,2-anhydro-3,5-di-*O*-benzyl- β -D-arabinofuranose 161

Antimetastasis

A practical synthesis from siastatin B of (3S,4S,5R,6R)-4,5-dihydroxy-6-(trifluoroacetamido)piperidine-3-carboxylic acid having antimetastatic activity in mice 173

Antioxidants

Synthesis of novel vitamin C phosphodiesters: Stability and antioxidant activity 123

Ascorbic acid phosphodiesters

Synthesis of novel vitamin C phosphodiesters: Stability and antioxidant activity 123

6-Azido-3-oxa-2,3,4,6-tetradeoxy-glycero-hexopyranose

Synthesis of kanamycin A analogs containing 6-amino-3-oxa-2,3,4,6-tetradeoxy-D- and -L-glycero-hexopyranose 107

Cation interactions

A detailed ¹H and ¹³C NMR study of a repeating disaccharide of hyaluronan: the effect of sodium and calcium ions 151

Chemical shift temperature coefficients

Influence of intramolecular hydrogen-bonding on the conformation of 3-deoxy-3-thioerido sugars 55

¹³C NMR

A multinuclear NMR spectroscopy study of the tungstate and molybdate complexes of D-fructose and L-sorbose 67

Complexes

NMR Study of uronic acids and their complexation with molybdenum(VI) and tungsten(VI) oxoions I

Conformation

A detailed ¹H and ¹³C NMR study of a repeating disaccharide of hyaluronan: the effect of sodium and calcium ions 151

Cross inhibition of glycosidases

Mixed-acetal glucopyranosides of 2-bromo- and 2-iodo-acetaldehyde by mild alkylation of lactol groups. Irreversible cross inhibition using a pair of glycosidases 189

Cyclomaltoheptaose (β -cyclodextrin)

Quantitative determination of native and methylated cyclodextrins by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry 41

Decomposition

Identification of per-*O*-(trimethylsilyl) derivatives of aldoses generated from thermal decomposition of *N*-(1-deoxy-D-fructopyranos-1-yl)proline: reversibility of the Amadori rearrangement 179

Deoxy

Recognition of β -D-Galp-(1 → 3)- β -D-Glc-pNAc-OR acceptor analogues by the Lewis α -(1 → 3/4)-fucosyltransferase from human milk 87

Drug delivery systems

A novel approach to the synthesis of lipophilic thymidinemonophosphoglucopyranosides as drug delivery systems 77

Fructose

A multinuclear NMR spectroscopy study of the tungstate and molybdate complexes of D-fructose and L-sorbose 67

Fucosyltransferase

Recognition of β -D-Gal p-(1 \rightarrow 3)- β -D-Glc-pNAc-OR acceptor analogues by the Lewis α -(1 \rightarrow 3/4)-fucosyltransferase from human milk 87

Galactose derivatives

Preparation of amidine derivatives from L-cyano-D-galactose 167

D-Glucopyranoside, 2-deoxy-2-sulfamino-

Binding properties of carbohydrate sulfamates based on ab initio 6-31 + G^{**} calculations on N-methyl and N-ethyl sulfamate anions 17

Glucopyranoside synthesis

Mixed-acetal glucopyranosides of 2-bromo- and 2-iodo-acetaldehyde by mild alkylation of lactol groups. Irreversible cross inhibition using a pair of glycosidases 189

Glucosiduronase inhibitor

A practical synthesis from siastatin B of (3S,4S,5R,6R)-4,5-dihydroxy-6-(trifluoroacetamido)piperidine-3-carboxylic acid having antitumour activity in mice 173

C-Glycosyl compounds

Preparation of amidine derivatives from L-cyano-D-galactose 167

Heparin

Binding properties of carbohydrate sulfamates based on ab initio 6-31 + G^{**} calculations on N-methyl and N-ethyl sulfamate anions 17

Heptakis(2,6-di-O-methyl)- β -cyclodextrin

Quantitative determination of native and methylated cyclodextrins by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry 41

Hexadecyl dinucleoside phosphates

A novel approach to the synthesis of lipophilic thymidinemonophosphoglucopyranosides as drug delivery systems 77

Hexadecyl nucleoside glucopyranoside phosphates

A novel approach to the synthesis of lipophilic thymidinemonophosphoglucopyranosides as drug delivery systems 77

Hyaluronan

A detailed ¹H and ¹³C NMR study of a repeating disaccharide of hyaluronan: the effect of sodium and calcium ions 151

1-N-Imino sugar

A practical synthesis from siastatin B of (3S,4S,5R,6R)-4,5-dihydroxy-6-(trifluoroacetamido)piperidine-3-carboxylic acid having antitumour activity in mice 173

Intramolecular hydrogen-bonding

Influence of intramolecular hydrogen-bonding on the conformation of 3-deoxy-3-thioerido sugars 55

Kanamycin analog

Synthesis of kanamycin A analogs containing 6-amino-3-oxa-2,3,4,6-tetra-deoxy-D- and -L-glycero-hexopyranose 107

Ketoses

A multinuclear NMR spectroscopy study of the tungstate and molybdate complexes of D-fructose and L-sorbose 67

Kinetics

Degradation of pectins in alkaline conditions: kinetics of demethylation 139

Lipophilic phosphotriesters

A novel approach to the synthesis of lipophilic thymidinemonophosphoglucopyranosides as drug delivery systems 77

MALDI-TOF-MS

Quantitative determination of native and methylated cyclodextrins by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry 41

Maltohexaose

Quantitative determination of native and methylated cyclodextrins by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry 41

Me₄Si derivatives

Identification of per-O-(trimethylsilyl) derivatives of aldoses generated from thermal decomposition of N-(1-deoxy-D-fructopyranos-1-yl) proline: reversibility of the Amadori rearrangement 179

Mixed-acetal glucopyranosides

Mixed-acetal glucopyranosides of 2-bromo- and 2-iodo-acetaldehyde by mild alkylation of lactol groups. Irreversible cross inhibition using a pair of glycosidases 189

Molybdate complexes

A multinuclear NMR spectroscopy study of the tungstate and molybdate complexes of D-fructose and L-sorbose 67

Molybdenum

NMR Study of uronic acids and their complexation with molybdenum(VI) and tungsten(VI) oxoions I

NMR

A detailed ^1H and ^{13}C NMR study of a repeating disaccharide of hyaluronan: the effect of sodium and calcium ions 151

Oligosaccharide analogue

Recognition of β -D-Gal- p (1 \rightarrow 3)- β -D-Glc- p NAc-OR acceptor analogues by the Lewis α -(1 \rightarrow 3/4)-fucosyltransferase from human milk 87

Pectin

Degradation of pectins in alkaline conditions: kinetics of demethylation 139

pH

Degradation of pectins in alkaline conditions: kinetics of demethylation 139

Pseudo- γ -turn

Influence of intramolecular hydrogen-bonding on the conformation of 3-deoxy-3-thioureido sugars 55

Quantification of cyclodextrins

Quantitative determination of native and methylated cyclodextrins by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry 41

Reversibility of Amadori rearrangement

Identification of per-O-(trimethylsilyl) derivatives of aldoses generated from thermal decomposition of *N*-(1-deoxy-D-fructopyranos-1-yl) proline: reversibility of the Amadori rearrangement 179

Rotational isomerism

Influence of intramolecular hydrogen-bonding on the conformation of 3-deoxy-3-thioureido sugars 55

Saponification

Degradation of pectins in alkaline conditions: kinetics of demethylation 139

Siastatin B

A practical synthesis from siastatin B of (3S,4S,5R,6R)-4,5-dihydroxy-6-(trifluoroacetamido)piperidine-3-carboxylic acid having antimetastatic activity in mice 173

Sorbose

A multinuclear NMR spectroscopy study of the tungstate and molybdate complexes of D-fructose and L-sorbose 67

Substrate recognition

Recognition of β -D-Gal- p (1 \rightarrow 3)- β -D-Glc- p NAc-OR acceptor analogues by the Lewis α -(1 \rightarrow 3/4)-fucosyltransferase from human milk 87

Sugar thioureas

Influence of intramolecular hydrogen-bonding on the conformation of 3-deoxy-3-thioureido sugars 55

Sulfamate, *N*-ethyl-

Binding properties of carbohydrate sulfamates based on ab initio 6-31 + G^{**} calculations on *N*-methyl and *N*-ethyl sulfamate anions 17

Sulfamate, *N*-methyl-

Binding properties of carbohydrate sulfamates based on ab initio 6-31 + G^{**} calculations on *N*-methyl and *N*-ethyl sulfamate anions 17

Tungstate complexes

A multinuclear NMR spectroscopy study of the tungstate and molybdate complexes of D-fructose and L-sorbose 67

Tungsten

NMR Study of uronic acids and their complexation with molybdenum(VI) and tungsten(VI) oxoions 1

Uronic acids

NMR Study of uronic acids and their complexation with molybdenum(VI) and tungsten(VI) oxoions 1

Vitamin C derivatives

Synthesis of novel vitamin C phosphodiesters: Stability and antioxidant activity 123

 ^{183}W NMR

A multinuclear NMR spectroscopy study of the tungstate and molybdate complexes of D-fructose and L-sorbose 67